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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,141	09/24/2003	Sean Michael Kane	1676 US	7391

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EXAMINER	
DELCOTTO, GREGORY R	
ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,141	KANE	
	Examiner	Art Unit	
	Gregory R. Del Cotto	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *13-26 and 28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12, 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-28 are pending. Applicant's arguments and amendments filed 2/14/06 have been entered.

Claims 13-26 and 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/2/05.

Objections/Rejections Withdrawn

The following objections/rejections as set forth in the Office action mailed 1/10/06 have been withdrawn:

None.

Priority

Priority has been corrected and has been granted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 8-11, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koito et al (US 2003/0130147).

Koito et al teach a stripping composition comprising at least one alcohol having an ether-bond in the molecule and an anticorrosive agent. See claim 1. Suitable alcohols include ethylene glycol monomethyl ether, diethylene glycol monomethyl ether, etc. See paras 67-68. Additionally, the compositions may include a weak acid such as acetic acid, propionic acid, malonic acid, etc. See para. 83. Amines may also be used in the compositions and suitable amines include monoethanolamine, diethanolamine, etc. See para. 85. It is desirable that the pH of the composition is between 6 to 12 during the use of the composition. See para. 89. The acid may be present in amounts from 0 to 15% by weight, the amine may be present in amounts from 1 to 40% by weight, and the alcohol may be present in amounts from 50% by weight or more. See para. 97. and claims 1-20. Note that, while water may be used in the composition, it is not a required component of the composition and embodiments containing no water are suggested by Koito et al. See para. 82.

Note that, with respect to the mole ratio of acid to amine of the composition as recited by the instant claims, the Examiner asserts that the broad teachings of Koito et al suggest compositions having the same mole ratio of acid to amine of the composition as recited by the instant claims because Koito et al teach compositions containing the same components in the same proportions as recited by the instant claims.

Koito et al do not teach, with sufficient specificity, a composition having the specific pH containing a nucleophilic amine, a moderate to weak acid, a glycol ether, a cosolvent, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a composition having the specific pH containing a nucleophilic amine, a moderate to weak acid, a glycol ether, a cosolvent, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success and similar results with respect to other disclosed components, because the broad teachings of Koito et al suggest a composition having the specific pH containing a nucleophilic amine, a moderate to weak acid, a glycol ether, a cosolvent, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Claims 5-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koito et al (US 2003/0130147) as applied to claims 1-4, 8-11, and 27 above, and further in view of Hara et al (US 2002/0128164).

Koito et al are relied upon as set forth above. However, Koito et al do not teach the use of 1-methyl-2-pyrrolidone and ethylene glycol in addition to the other components of the composition as recited by the instant claims.

Hara et al teach a resist stripper containing a peroxide, a quaternary ammonium salt, and at least one member selected from the group consisting of an amine, a water-soluble solvent, and water. Suitable amines include a monoethanolamine, diethanolamine, triethanolamine, etc. See para. 22. Suitable solvents include N-methyl-2-pyrrolidone, ethylene glycol, ethylene glycol monomethyl ether, etc. See para. 23. Additionally, an anticorrosive acid may be added including acetic acid, sebacic acid, adipic acid, etc. See para. 24. The water-soluble solvent is present from 1% to 50%, water is from 1% to 90%, the amine is from 1 to 50%, and the organic solvent is from 1 to 50%. See para. 25.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use a solvent such as 1-methyl-2-pyrrolidone or ethylene glycol in the composition taught by Koito et al, with a reasonable expectation of success, because Hara et al teach the equivalence of 1-methyl-2-pyrrolidone or ethylene glycol to ethylene glycol monomethyl ether in a similar stripping composition and further, Koito et al teach the use of ethylene glycol monomethyl ether.

Response to Arguments

With respect to Koito et al, Applicant states that the composition disclosed by Koito et al is intended for use in copper-containing substrates, whereas Applicant's compositions are intended for use against aluminum-containing substrates. Also,

Applicant states that the claimed compositions are non-aqueous compositions whereas all the examples of Koito et al contain water and that Koito et al state that when little water was used, damage to the substrate was observer. In response, note that, the Examiner maintains claims 1-12 and 27 are composition claims "for cleaning microelectonic substrates" and Koito et al are also drawn to compositions "for cleaning microelectronic substrate". The Examiner asserts that Koito et al teach compositions containing the same components in the same proportions as recited by the instant claims and thus, the composition taught by Koito et al meets all of the claim limitations. Alternatively, even if the claims recited "for cleaning aluminum-containing substrates", this would be an intended use of the composition and not read as a patentable limitation. Note that, if the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended us of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. See MPEP 2111.02. With respect to the amount of water used in the compositions taught by Koito et al, the Examiner maintains that the broad teachings of Koito et al suggest compositions which are nonaqueous and that the teachings of a reference are not limited to the preferred embodiments. Furthermore, the Examiner maintains that the damage which occurred to the substrates as shown in the examples of Koito et al was not attributed to the amount of water used but to various mixtures of different alkanolamines and corrosion inhibitors.

With respect to the rejection under 35 USC 103 using Koito et al in combination with Hara et al, Applicant states that the compositions of Hara et al and Koito et al are completely different since the compositions of Hara et al are drawn to aqueous compositions and that the two references are not combinable. In response, note that Hara et al is a secondary reference relied upon for its teaching of specific solvents. The Examiner maintains that Koito et al and Hara et al are combinable since both references are drawn to the same field of endeavor and are used for cleaning and/or stripping semiconductor substrates; one of ordinary skill in the art would have clearly been motivated to use a solvent such as 1-methyl-2-pyrrolidone or ethylene glycol in the composition taught by Koito et al, with a reasonable expectation of success, because Hara et al teach the equivalence of 1-methyl-2-pyrrolidone or ethylene glycol to ethylene glycol monomethyl ether in a similar stripping composition and further, Koito et al teach the use of ethylene glycol monomethyl ether.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory R. Del Cotto
Primary Examiner
Art Unit 1751

GRD
May 1, 2006